



Noted ADCOM/AD 1980

PMD NO: R-S 4047(18)/12431F ..

DATE: 8 8 OCT 1980

HQ USAF PROGRAM OFFICER: LtCol Phillip J Baker/ROSD/48440

PROGRAM MANAGEMENT DIRECTIVE

FOR

DEFENSE SUPPORT PROGRAM (DSP) (U)

FOR: AFSC, ADC, AFLC, SAC, MAC, ATC, AFCC, AFTAC, TAC, AFTEC, AND ESC

1. SPECIFIC PURPOSE: This PMD directs changes in DSP hardware and software design to improve the performance capabilities of the system; to improve the survivability of the satellite, ground element, and mission data; and directs continued acquisition of system components to maintain operational mission support. AFSC is designated the Implementing Command. SAC is designated the Operating Command, in support of CINCAD who exercises operational control over the DSP. AFLC is designated the Supporting Command. AFTEC is designated the operational test and evaluation agency. ADC, MAC, TAC, AFCC, AFTAC, ESC, and are designated Participating Commands/Agencies. This PMD supersedes PMD R-S 4047(12) through PMD R-S 4047(17).

2. PROGRAM SUMMARY

a. References: While each of the reference titles is normally unclassified, some of the titles or the list taken together reveal the mission of DSP. This paragraph is therefore classified SECRET.

(1) Required Documents

- (a) Update Sheet for the Defense Support Program Development Concept Paper No. 58, 1 September 1972.
- (b) Computer Resources Integrated Support Plan (CRISP) for the Defense Support Program, 11 May 1977.
- (c) DSP Baseline Launch Plan, 1 Feb 78.
- (d) DoD Shuttle Transition Plan, latest revision.

(e) DSP Tactical Control Doctrine (ADCOMR 55-55), Volume I with three changes, 1 March 1977; Volume II with one change, 6 July 1978; Volume IV with three changes, 20 December 1976.

(f) DepSecDef memo for SAF, Subject: DSARC I for Advanced Warning Systems, 15 Feb 80; and SAF/AL memo for USAF/CY, Subject: DSP DSARC I Implementation, 3 Mar 80.

(2) Related Documents

(a) ADCOM ROCs 6-73, 3-77, 4-77, WHMCCS OR/ROC DSP-01-72, and 13-77, and Joint ADCOM/SAC GCR 205-78.

(b) JCS Publication 19.

(c) Mission Analysis for Missile and WDET Surveillance, March 1975.

(d) PMD X-07 105(1)/PE 12436F, Command Center Processing and Display System (CCPDS).

(e) SEEK OPTIONS PMD, November 1978.

~~(f) PMD 8065(1)/PE 62429, Warning Information Correlation,~~
10 October 1978.

(g) Mobile Ground Terminal System Operational Concept, 11 Oct 79 (not approved by USAF).

(h) Mission Element Need Statement (MENS) for Improved Missile Warning and Attack Assessment SecDef memo to SAF, March 19, 1980.

(i) Master Plan for Ballistic Missile Tactical Warning and Attack Assessment (FY 80-89), 31 March 1980.

b. (U) Priorities

(1) USAF Precedence Rating: 2-7.

(2) USAF Master Urgency Listing: Cue-Cap 17.

c. (U) Force Structure

(1) OSD has designated DSP the key element of the Worldwide Military Command and Control System (WHMCCS) Warning Network. It is a key system in support of the CINCAO tasking of worldwide missile warning and nuclear detonation detection.

(12)

(SPS) is projected to become operational in FY 81. Data is transmitted to the users via the Ground Communications Network (GCN)

The GCN will be upgraded to incorporate the SPS, and increase survivability by increasing the number of communications nodes. The Multi-Purpose Facility (MPF), a training, software development, and data analysis facility supporting SAC, ADC, AFSC/Space Division, ATC

An SPS Operational Support Module (OSM) will be developed to support software and hardware development and maintenance, training

The MPF and OSM will provide host support for the SPS (i.e. data value generation, ephemeris, diurnal boresight, software development, hardware/software maintenance and training).

(3) CINCAD exercises operational control over the DSP. Engineering and engineering support of elements of the DSP are the responsibility of AFSC until transfer of program management responsibility to AFLC. ~~AFSC will retain engineering support responsibility for DSP satellites.~~ Operational organizational support and maintenance, and management of turned over elements of the DSP are the responsibilities of SAC. Maintenance is the responsibility of AFCC. AFLC is responsible for logistics and engineering support of transferred system elements with the exception of the SPS. SAC performs the AFLC function on the SPS. SAC will be responsive to the requirements of CINCAD and JCS/HQ USAF designated users.

The Air Weather Service (AWS) receives solar proton data from DSP solar particle detectors. Other users provided DSP data through the NORAD Expanded Missile Warning Display System include LANTCOM, PACOM, and USEUCOM.

d. Program Objectives

(1) To provide a highly available, survivable, and reliable satellite-borne surveillance system which will detect and report missile launches

(2)

The following data will be used to provide tactical warning and limited attack assessment (commensurate with current and future system capabilities)-to the NCA of an ICSM and/or SLBM missile

- (2) To detect and report in nuclear events (as a secondary mission)
- (3) To notify DSP users of ICSM launches
To notify the users of SLBM launches

a. Intelligence/Threat Estimate

The Defense Intelligence Agency (DIA) validated Threat Assessment Report (TAR), Defense Support Program (DSP), Dec 79, and Space Threat Environment Description (validated by USAF/IN) will be the basis for the threat assessment in support of this PMD.

3. PROGRAM MANAGEMENT DIRECTION

The following actions are mandatory. AF/RDS and AF/XOO will be notified in advance when possible, of any inability to comply. CINCAD should be included in the notification if conditions could adversely impact operational performance of the DSP system.

a. Operations

- (1) SAC will test system capabilities on a regular and recurring basis without perturbing the primary mission. The evaluated subsystems will include ground station hardware and software, the GCM, and the appropriate

elements of the Command Center Processing and Display System. Results of the system tests, and the evaluation criteria, will be provided to AF/RDS, AF/XOO and ADCOM/J-3 on a semi-annual basis.

(2) The DSP Operational Employment Concept will continue to be incorporated in the ADCOM Tactical Control Doctrine (ADCCMR 55-55) and will include all new system upgrades as they become operational. SAC, as soon as possible, with participating command support, will develop a JCS-approved Oplan. This plan will be coordinated with AFSC, ADC, MAC, AFLC, ATC, AFTAC, AFCC, HQ USAF and appropriate theater commanders who will develop supporting plans as necessary.

(3) CINCAO will initiate replenishment satellite launches when operationally required following ADC/SAC staff coordination. Replacement may be required due to failure or performance degradation. HQ USAF will provide final approval. Launch notification will be accomplished with transmission of Format A, B, or C messages as depicted in ADCOM 55-55.

(4) AFSC and SAC will maintain a baseline launch capability within the constraints specified in the DSP Baseline Launch Plan (BLP), dated 1 Feb 78.

Baseline schedule was established to afford the launch of a highly reliable satellite.

AF/RDS, AF/XOO and ADCOM/J-3 are to be immediately informed whenever the provisions of the BLP cannot be satisfied. AFSC with SAC and ADC coordination will update the BLP for inclusion of the Titan III 340/Inertial Upper Stage (IUS) as soon as possible and submit to AF/RDS and AF/XOO.

(6) All ADP hardware located at operational sites will be modified to the latest vendor specification level whenever such modification does not degrade mission performance. For non-SPS hardware, AFLC is responsible for procurement, configuration management, and any necessary follow-on support for installed modifications. For SPS hardware, SAC will perform the AFLC functions.

(7) AFSC will ensure that planning for payload processing for the Rotating Service Structure (RSS) is accomplished. RSS processing time is to be minimized in the Space Shuttle Factory-to-Offline Facility-to-Pad timelines. The offline facility to be used by DSP for mating with the IUS and checkout is the DoD Shuttle/Payload Integration Facility (SPIF). NASA standard and optional services for DSP launches, including DSP processing time in NASA facilities, are to be negotiated in the DSP Payload Integration Plan (PIP) and agreed to in the DoD/NASA Launch Services Agreement.

(8) One existing Titan IIIC booster, and two Titan 340/Inertial Upper Stage (IUS) missiles are to be assigned for the next three DSP launches. P.E. 35119, Space Boosters, will provide the hardware support funding in FY 81 and subsequent years to maintain launch readiness of these boosters.

(9) SAC will provide updated DSP performance information (Missions A and B) to AF/XOO, AF/RCS and AOCOM/J-3 each quarter. The information should be cumulative and reflect events detected and missed for the primary threat vehicles. A breakout of mission class and/or booster type and country of origin should also be included.

b. Flight Hardware

(1) Design and Development. AFSC will:

(a) Initiate a modification program for transitioning DSP satellites to the Space Shuttle as early as practicable. This modification program will insure that DSP satellites are compatible with the Titan IIIC Expendable Space Booster until Titan III (340)/Inertial Upper Stage (IUS) and/or Space Transportation System (STS) is available. The objective of the DSP modification program is to provide DSP satellites compatible with the Titan III (340)/IUS in 1981 and DSP satellites compatible with the Shuttle in 1982. The DSP satellite modification program will consist of retrofitting two satellites for Titan III (340)/IUS compatibility and retrofitting two satellites for Sensor Evolutionary Development (SED) and Shuttle compatibility.

(b) Develop the necessary (as defined in STS/IUS Transition Studies) design modifications to satellites 12 and 13 to be Titan III (340)/IUS and Titan IIIC compatible, and satellites 5 & 6 to be STS/IUS and Titan III (340)/IUS compatible. The design effort, begun in FY 78, is to support an FY 79 and 80 funded retrofit program.

(c) Continue to design and develop the Sensor Evolutionary Development (SED) sensor. The SED design will include newly designed Signal Electronic Subsystem; the Advanced Thermal Control Subsystem, a new focal plane that includes Above-the-Horizon (ATH) detection capability; and integration of Advanced RADEC I (which includes the Advanced ABL) equipment.

(d) Continue the definition and design of satellite 5 and 6 retrofit changes for performance compatibility with SED to support the FY 79 and 80 retrofit program.

(14)

(e) Initiate the design and development of Satellite 14 to reflect alternative 2 of the DSARC I for Advanced Warning Systems, 15 February 1980. Satellite 14 will retain those design features already incorporated in the Satellite 5 and 6 retrofit program.

transmission of 1 Satellite-to-satellite crosslink to provide secure data

This capability will be accomplished using the technical expertise and resources developed by Advanced Space Communications (PE 63431F) to the maximum extent possible. The crosslink design will be based upon "standardized" crosslink/uplink development program components.

4 Improve the design to provide for increased periods of satellites autonomy from fixed ground station commanding and AFSCF and satellite ephemeris determination.

6 Tailored acquisition management procedures will be used for the acquisition of these satellites and ground system upgrades associated with the new satellites.

(f) SAC/ADC, with AFSC support will assess the operational impacts of the above improvements. If applicable, ADC will develop and submit a System Operational Concept (SOC) to AF/X00 for approval.

(h) Incorporate impact sensors on new satellite 14 and subsequent and retrofit on satellites 5 and 6. AFSC will update the impact sensor assemblies on satellites in storage to reduce the false alarm rates.

(564)

Modifications should consider shielding and isolation techniques. SAC will develop and employ operational procedures to maintain false alarms at an acceptable level.

(j) AFSC will assess the cost and schedule for upgrading sensors 11-12 to sensor 13 configuration and advise AF/RDS on the results.

(k) Plan for retrofit of low noise star sensors of satellite 12, 13, 5 and 6 dependent on satellite and star sensor availabilities.

(l) AFSC with AFTAC, through Department of Energy, will determine feasibility of incorporating Advanced RADEC II on Satellite 14 and subsequent.

(m) The requirements are contained in SAC SON 08-79. A briefing will be presented to HQ USAF and SAF/AL prior to satellite 14 contract award.

(2) Production Hardware. AFSC will:

(a) Retrofit two satellites to be Titan III (34)D/IUS compatible with FY 79 and 80 funding. Retrofit two satellites to a SED and STS capability in FY 79 and 80 funding with delivery of satellites in FY 82. The retrofit schedule will reflect Congressional funding action in the FY 79 President's Budget.

(b) Plan for the procurement of Satellite 14-17 in FY 82 with procurement funding thru FY 86. The satellites will be STS/IUS compatible incorporate SED sensor, advanced RADEC I and the design improvements dictated by alternative 2 (reference paragraph 3b (1)(e) above). Determine the impact of maintaining compatibility with Titan III (34)/IUS.

(3) Survivability. A survivability program should be established in accordance with AFR 80-38. Satellites 5 and 6 retrofit and subsequent new satellites will incorporate nuclear hardness criteria requirements under conditions outlined by the Nuclear Criteria Group (NCG). Satellites 10-13 will meet the 1973 NCG criteria. A satellite survivability design verification program should be initiated to verify the operability and reliability of the designs developed in response to this paragraph and all other survivability design changes considered. The Program Management Plan should identify the anticipated survivability levels for each satellite. The following criteria apply to satellites 5, 6, 14 and subsequent.

(2)

DEFENSE SUPPORT PROGRAM CRITERIA (Revised)

No Mission-Critical
Equipment Impact

Mission Critical Equipment
Self Recovery

weapon design

(4) ~~AFSC, through in-house review, should evaluate satellite~~
subsystem procurement and production methods in an effort to reduce unit
production costs and/or improve satellite on-orbit reliability. Where
appropriate, cost effective recommendations will be made to AF/RDS.

(5) Electronic Security Command (ESC) will assist AFSC in
identifying the COMSEC requirements and equipment to enhance the electromag-
netic survivability of the ground and satellite elements. ESC is responsible
for providing the COMSEC equipment to support system requirements and COMSEC
engineering support required to integrate CI-1 and other COMSEC equipment into
the DSP system.

(6) A summary of planned and incorporated satellite capabilities
follow in the table below:

Satellite Number

c. Ground Facilities and Operations

(1) SAC will operate and maintain the Simplified Processing Station (SPS). ~~SPS operating capabilities are intended to satisfy the following conditions:~~ backup as required for the existing ground stations;

An Initial Operational Capability (IOC) will be declared by SAC as soon as confidence has been established in system operation.

(a) AFSC will complete development of a Link II satellite status capability for the prototype SPS to provide an austere satellite health monitoring capability. The SPS is not intended to achieve and maintain a satellite systems engineer function and capability.

(b) Residual prototype SPS dual string equipment, the SPS mini-depot and the 15 1/2 foot antenna should be used to provide a capability for software development, hardware/software maintenance, and training. AFSC will complete the upgrade of the Initial Operational Support Module (IOSM) to function as an Operational Support Module (OSM).

A Ground Communications Network (GCN) interface will be included. Use of the OSM will require an update to the current Memorandum of Agreement on the use of the IOSM, and will be incorporated in the Tactical Control Doctrine.

(3-1)

(2) AFSC, in coordination with ADC, SAC, AFCC, and AFLC will procure a replacement for GCN II, referred to as GCN III. The plan, dated 16 April 1978, which describes the approach, and considers integration of the SPS, Airborne Command Posts, existing ground stations and user installations, will be used as the departure point. The new GCN should have sufficient flexibility to incorporate additional Sources/Users without major redesign. SAC and AFLC will institute planning for removal of GCN II hardware. The removal will commence 90 days after completion of OT&E of the GCN III system.

(3) AFSC will be responsible for electromagnetic pulse (EMP) shield inspection and testing associated with any modifications AFSC has been directed to make to the existing facilities, as well as correction of any deficiencies resulting from those modifications. AFSC, assisted by SAC, AFCC and AFLC, will develop a hardness assurance and hardness maintenance program for CGS OGS, SPS and MGT. Routine EMP hardness maintenance, inspection and testing of EMP shielding will be the responsibility of SAC and AFCC.

(4) AFSC and SAC/AFCC will provide engineering/provisioning data to AFLC as modifications or mission changes are made affecting the DSP Ground Data System so that follow-on support can be provided in the most expeditious manner.

(5) AFSC will modify the DSP Large Processing Station/Simplified Processing Station hardware/software for support of the evolutionary sensor and an advanced RADEC 1. ~~AFSC will modify the Operational Support Module (OSM) for a simultaneous Mission A and B capability and to support the evolutionary sensor and advanced RADEC 1.~~ The Large Processing Station (LPS) modification will include replacement of Central Processing Units and preprocessors to preclude projected unsupportability of the current 360/75 systems. The new hardware will be compatible with existing operational software. AFSC will procure the necessary hardware and related system integration services including provisioning, documentation support software and facility modifications. ATC is responsible for training. SAC, AFCC and AFLC will support this effort to ensure proper identification of user and logistic support requirements. AFLC will initiate planning for replacement of the LPS peripheral hardware, displays, printers, disks, tape drives, etc.

(6) AFSC will procure the necessary modifications and/or new hardware/software to provide for adequate test and checkout equipment for new and modified satellites. Shuttle compatibility will be considered in providing such equipment.

(7) AFSC will design a Mobile Ground Terminal (MGT) starting in FY 81, procure three MGTs in FY 81 (pending Congressional approval) and plan for the procurement of three each MGTs in FY 82. The purpose of the MGT is to enhance DSP data survivability. The design and procurement of MGTs must capitalize on the Simplified Processing Station (SPS) development and testing.

(b) ADC, with SAC coordination, will update the MGT system operational concept for the deployment of six MGTs and submit to HQ USAF/XOO for approval. After approval ADC, with SAC coordination, will maintain the system operational concept and review and evaluate changes generated through the iterative process of operational concept development.

(c) AFSC, with AFLC and the participating commands, will ensure that an appropriate integrated logistics support (ILS) program is established to meet the objectives of AFR 8CJ-8. Life cycle cost analysis will be performed in determining the preferred support approach. Reliability and maintainability goals will be established to be included in a subsequent PMO revision and will be demonstrated before production go-ahead.

(d) AFSC will begin the design and development of MGT user interfaces starting in FY 81.

~~(e) AFSC will be the system integrator for the MGT design and procurement. As system integrator, AFSC will provide overall management for the MGT with a goal of Program Management Responsibility Transfer (PMRT) and turnover of an operational MGT system; procurement of those items directed and funded under PE 12431F; identification of system requirements and impacts on external systems; and management of design compatibility of systems procured by other organizations and directed under PE 12431F to ensure that operational requirements are met by all equipment elements associated with the total MGT operational system.~~

(f) SAC, with support from AFSC and ADC, will initiate site selection procedures for one or more CONUS and overseas Main Operating Bases (MOB) for MGTs. Funding requirements for necessary site preparation will be submitted as soon as possible. Submittal should be no later than the FY 83 Initial Military Construction Program (MCP) to support the FY 83-87 POM.

(g) AFSC, with support from SAC and ADC, will assess the magnitude and cost of the program to assure MGT location uncertainty given the variety of possible human and technological threats. The results of this assessment will be given to the Air Staff and SAF/AL as soon as possible, but no later than the critical design review (CDR). This requirement must be met in order to obtain SAF/AL approval for the full production go-ahead of the FY 81 MGTs. Periodic status reports are encouraged.

(h) AFSC, with support from ADC and SAC, will assess the impact of adding the following capabilities to the MGT program: mobile JRSC terminals

*Dr. Cooper
input
not trained?*

6-64

capability at each MGT and a bluesuit software maintenance capability. The output of this effort should be the funding status; funding requirements for those capabilities not funded, but required by the operator; schedule impacts; and a justification for each. This data will be submitted to AF/RDS, AF/XOO and AF/XOK by Systems Design Review.

d. Software

(1) The "Computer Resources Integrated Support Plan (CRISP) for the Defense Support Program Large Processing Stations, "dated 11 May 1977 will be the governing policy document for all contemplated or directed Class 1 changes to turned-over DSP software. The "Operational/Support Configuration Management Procedures (O/SCMP) for the Defense Support Program Large Processing Stations", dated 11 May 1977 formalizes the procedures that support the CRISP. The Computer Resources Working Group (CRWG) will be responsible for adding the SPS system to the current CRISP and for developing O/SCMP procedures for the SPS.

(2) SAC, with ADC, AFSC and AFLC support, will continue to develop and implement coordinated plans for DSP software improvements and modifications to optimize the use of available personnel and hardware resources of the command. This Software Evolution Plan (SEP) will be forwarded for Air Staff review and approval for implementation. The coordinated efforts should include, but are not limited to, the following deployments/improvements:

(a) SAC and AFSC, with ADC support, will continue software studies and reviews of the operational software to identify potential system capability improvements and identify the impacts of the contemplated changes in system hardware, software or procedures. CRISP procedures and Life Cycle Costing procedures are to be completed prior to implementation of any major software changes.

1 For SAC, software efforts will consider initiation/ collection algorithm optimization, improvements in tactical parameter accuracy, detection of non-nominal trajectories, and realtime boresighting.

2 For AFSC, Large Processing Station software efforts will concentrate on production of System 7.0 for operational employment of SED satellites (ref paragraph 3c(6) above). The software baseline for this effort is operational System 6.1, Version E. The product baseline, System 7.0 will be Version E augmented by accommodation of SED for below-the-horizon (BTH) and above-the-horizon (ATH) mission accomplishment, line-of-sight improvements, AR-I modifications, and SED command and control requirements. AFSC will consider incorporation of mobile event processing.

1-84

³ SAC will integrate the software developed into the operational product baseline, along with SAC developed software modifications.

⁴ The above efforts, and any additional, must be documented by CRISP/SEP and be within approved program funding.

(b) SAC will continue to conduct stress evaluations to determine total DSP system performance over a wide spectrum of scenarios involving both missile launches and nuclear detonations. Any operational deficiencies revealed in such stress evaluations will be processed in accordance with the CRISP.

(d) AFSC will develop software for replacement of GCN II and software to support the evolutionary sensor. This will be time-phased to support the hardware acquisition.

(3) SAC will maintain the operational software for the CI-1 and the Simplified Processing Station (SPS) systems; AFSC will maintain the development software for the SPS.

e. Technical Assessments

(1) AFSC and SAC will continue to conduct assessments aimed at increasing system performance and reliability to meet approved objectives, and reduce life cycle cost.

(2) AFSC will continue to assess survivability of the DSP to determine if there are financially attractive approaches for improving end-to-end system survivability.

(4) AFSC will conduct assessments to accommodate the impact of satellite 14 and subsequent satellites within DSP ground hardware and software elements including the AFSCF, LPS, SPS and MGT.

f. Other Effort

(1) AFSC will update the Program Management Plan (PMP) by 15 Dec 80 to reflect direction/guidance contained in this PMO.

(2) An updated Ten-Year Computer Assets Utilization, Requirements and Disposition Plan will be developed by AFSC, assisted by ADC, coordinated with AFLC, FTD and ADC where applicable, and submitted to AF/RDS by AFSC by 28 February 1981. The plan will address method of acquisition, time phased procurement cost (as appropriate), utilization and method of disposition for all current and planned data processing equipment

supporting every facet of the DSP. The plan will reflect the current status of all DSP data processing assets, both operational and developmental, including SPS and MGT ADPE assets.

(4) Under Program Element 12431F, AFSC will perform the necessary system concept definition and validation tasks to insure that the technologies arising from the joint Air Force/DARPA program (technology developments, experiments and demonstrations associated with focal planes, on-board processors, etc.) are incorporated in the DSP program at the appropriate time

The output of these concept definition/validation studies should be funding requirements, schedule impacts, and technical risks for alternative configurations of Satellite 18 and subsequent. This data will be submitted to AF/RDS as required to support DSP PPBS.

(5) ~~SAC will accomplish a semi-annual analysis of each space-~~
~~crafts sensor detection capability, as affected by focal plane temperature.~~
The results of this analysis will be provided to HQ USAF/RDS, XOO, AFSC, and ADCOM/J-3 and will be included in the GAP analysis to aid in determining operational satellite life cycles.

(6) AFSC with AFTEC coordination will submit a Test and Evaluation Master Plan (TEMP) to AF/RDS for the satellite 14-17 upgrades including the space and ground segment of the system by 1 Dec 80.

(7) AFSC will submit with each budget input (POM and BES) for DSP an exhibit which describes the tasks required for each launch requiring funding in the POM or BES years, the funds required for each task, and the source of those funds (by Program Element).

(8) AFSC will ensure that updated STS Forms 100 are provided to NASA within 30 days of revised program direction or other events that cause programmatic changes affecting STS Forms 100 data. Information copies will be provided to AF/RDSD/RDSL.

4. PROGRAM MANAGEMENT GUIDANCE:

a. The DoD Space Shuttle Transition Plan, Annex D1, as modified by DOD Space Mission Model, Revision 9, is the approved transition plan for the Defense Support Program. Proposed revisions to the approved plan will identify the impact of the change on all other annexes.

b. AFSC, SAC and ADC should continue study efforts to improve the survivability, reliability, and performance of the DSP system in support of

evolving WMCCS architecture. Recommendations for improvement will give consideration to complementary support provided by other elements of the WMCCS Warning Network. Emphasis will be placed on reducing the long term cost of system development, acquisition and operation.

c. Schedules

<u>Responsible Agency</u>	<u>Date Required</u>	<u>Activity</u>	<u>Applicable Paragraph</u>
SAC	Semi-Annual	System Test	3a(1)
ADC	As required	ADCR 55-55	3a(2)
SAC	ASAP	SPS Oplan	3a(2)
AFSC	As required	BLP Deviation	3a(4)
AFSC	ASAP	BLP for T340	3a(4)
SAC	Quarterly	DSP Performance	3a(9)
AFSC	Feb 81	Data Compression	3b(1)(e)5
AFSC	ASAP	Sensor 10-12 Upgrade	3b(1)(1)
AFSC	ASAP	RADEC II on Satellite	3b(1)(1)
SAC	ASAP	SPS IOC	3c(1)
AFSC	15 Dec 80	MGT C&S	3c(7)(a)
ADC	ASAP	MGT SOC revision	3c(7)(b)
SAC	FY 83 POM	MOB MCP Requirements	3c(7)(f)
AFSC	Prior to MGT CDR	MGT location uncertainty	3c(7)(g)
AFSC	Prior to MGT SDR	MGT capability additions	3c(7)(h)
SAC	As required	SEP	3d(2)
AFSC	15 Dec 80	Updated PMD	3f(1)
AFSC	28 Feb 81	10 yr Computer Plan	3f(2)
AFSC	1 Dec 80	TEMP	3f(6)
SAC	Semi-Annual	Detection Capability	3f(5)
AFTEC	As required	OT&E Recommendations	41

d. Resources

(1) Determination and Findings currently in effect are: D&F PPM-78-0F-11, D&F 78-11 C-63, AP PMD-79-0002, Jan PMD-80-0F-8, D&F 80-11-54, D&F 81-11C-5.

(2) Telecommunications funding in support of DSP is managed under P.E. 12447F with AF/ROSD the designated OPR. All telecommunications funding requirements should be submitted jointly to AF/RDS and AF/XOO.

(3) Financial: The Budget Year and future portions of the funding profiles shown below are for planning purposes only. This document does not con-

stitute authority to commit, to obligate, or to expend funds, except as authorized in the appropriate Procurement Authorization (PA) or Budget Authorization (BA).

(a) Current year (and prior years) Program (\$ in M): The funds shown below reflect the amounts appropriated by Congress and any approved budget amendments/supplements or reprogramming actions:

<u>Appropriation</u>	<u>Prior Year</u>	<u>Current Year FY 80</u>
3600	600.6	31.1
3020	825.6	104.6
3080	235.5	24.0
Initial Spares	3.2	2.5
3300	17.3	
3400	110.7	39.9
3500	43.8	9.3
Total	1836.7	211.4

(b) Approved Program (\$ in M): The OSD approved program based on the President's FYDP is:

<u>Appropriation</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84</u>	<u>FY 85</u>
3600	72.9	135.3	153.1	162.9	178.9
3020	51.9	192.3	173.2	210.7	57.7
3080 (w/spares)	90.1	10.7	75.1	4.7	62.9
3400	47.6	45.4	51.1	54.9	56.7
3500	9.4	9.5	10.1	11.3	12.1
Total	271.9	393.2	462.6	444.5	368.4

(c) Air Force Current Position (\$ in M): The current Air Force funding position based on the BES through the basic program is shown below. It is subject to OSD approval, is not program direction, and should only be considered the program's tentative financial plan.

<u>Appropriation</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84</u>	<u>FY 85</u>	<u>FY 86</u>
3600	145.0	81.6	30.5	26.3	16.9
3020	237.1	200.3	205.0	238.1	102.3
3080	90.6	8.8	5.3	2.2	5.6
Initial Spares	1.4	.6	.6	.6	.6
Class IV Mod					
3400	52.1	63.9	62.7	60.0	56.1
AFSC (Non Add)	30.3	31.5	26.7	23.1	17.7
3500	11.3	12.0	13.6	14.6	14.7
Total	537.3	367.2	317.7	341.8	196.1

(4) The FY 82-85 funding represents the Air Force's Sep 80 Budget Estimate Submission (BES) to OSD for the FY 82 President's Budget. It includes the adjusted FY 80-81 Spacecraft 14 design funds to reflect the deferral of Sata 11e, 14 procurement to FY 82 and a change to the Mobile Ground Terminal (MGT) procurement to three in FY 81 and three in FY 82. It does not include funds for development of sophisticated MGT/user interfaces nor integration of the MGTs

(5)

into the Ground Communications Network. Funds reflect procurement of a satellite 14-17 in FY 82 and funding through FY 86. AFSC should structure a program within the proposed funding. AF/RDS should be notified immediately if any inconsistencies are anticipated between the directed program and the funding outlined above. Proposed alternatives to this funding profile are encouraged, if benefit to the Air Force can be identified. Any alternatives should be forwarded as soon as possible.

e. Procurement

(1) Competitive procurement and design to cost philosophies should be employed to the maximum extent possible consistent with operational requirements and management considerations.

(2) Life cycle cost (LCC) analyses should be employed in cost effectiveness studies that influence design and procurement decisions, and the evaluation of engineering change proposals. DoD LCC Guide LCC03, AFR 800-3, and AFR 800-11 apply.

f. Logistics: Integrated logistics support (ILS) principles will apply using guidance contained in AFRs 800-3, 800-8, 800-12.

g. Security: The Security Classification Guide (SCG), Defense Support Program, dated 1 Mar 79, and subsequently approved amendments, provide security guidance for the DSP. SAC will assume responsibility for the SCG. Updates must be fully coordinated and submitted to HQ USAF/RDS for approval by SAF/AL. For current direction concerning foreign disclosure, reference should be made to the appropriate Delegation of Disclosure letters, as redelegated by major commands. Essential USP facilities, including the SPS, are designated security Priority A and will be afforded security in accordance with AFR 207-1 and AFR 207-21. Requirements for Base Installation Security Systems (BISS) will be fully documented and submitted to AFOSP for consideration, along with other priority requirements.

h. System Safety Engineering: All directives addressing a system should include system Safety Engineering requirements in accordance with AFR 127-8.

i. Test and Evaluation: AFTEC will, in coordination with AFSC, SAC and ADC, review the program and recommend Operational Test & Evaluation (OT&E) management for each program segment to HQ USAF/XOORE/RDS and the OT&E command in accordance with the AFTEC/SD MOA. The decisions will be implemented by a subsequent PMD amendment.

j. Turnover and Program Management Responsibility Transfer: AFSC and AFLC will develop a Program Management Responsibility Transfer (PMRT) agreement for all new systems and subsystems introduced into the DSP Program, using guidelines contained in AFR 800-14. SAC will command-support, including Program Management Responsibility, the SPS after completion of IOT&E. AF/RDS will be advised of PMRT dates so appropriate PMD direction can be issued. PMRT documents will be referenced in the PMP. Turnover will be in accordance with AFR 800-19.

k. Manpower: The latest approved manpower levels are contained in the FY 82-86 BES.

1. Data Automation: HQ USAF (AF/ACDC) will participate in the DSP program as the Office of Collateral Responsibility (CCR) for Automatic Data Processing (ADP) policy guidance. ADP resources acquired in compliance with this PMO will be acquired/managed in accordance with AFR 300-14 unless: (a) the ADPE is acquired by the Air Force as a separate entity or, (b) the ADPE is procured as GFE to the contractor. In these two instances, AFR 300 series will govern the ADP resource acquisition. The government rights to software will be determined in accordance with DAR 9-600. The governing directives and procedures for the management of the ADP subsystem after OT&E and turnover to current operations, should be decided by the Computer Resources Working Group (CRWG) and documented in the Computer Resources Integrated Support Plan (CRISP) in accordance with AFR 800-14, paragraph 2-4 and 3-8.

m. Personnel Training:

(1) AFSC will maintain a Personnel Subsystem (PS) function to act as a focal point for the timely identification of required training actions related to new acquisitions and discrepancy resolutions. The using commands will identify their Trained Personnel Requirements (TPR) directly to ATC. ATC will identify training equipment and technical data requirements to the PS manager for procurement, as appropriate, and will establish training programs to satisfy all validated training requirements. Support required by ATC in the contractor's facilities, other than Type I contract training, will be provided by AFSC. A time-phased plan for providing required training will be incorporated into, or attached as an annex to, the Program Management Plan.

(2) ATC training conducted in the MPF will use available equipment to the maximum extent, consistent with valid operation/maintenance requirements. When hardware is not available for training use, ATC will substitute academic instruction. The operating/using commands are responsible for equipment oriented follow-on training through formal on-the-job (OJT) training programs. OJT problems generated by the lack of access to one-of-a-kind operational equipment will be referred to the PS manager by the using commands for resolution. Training developed for DSP will reflect the requirements contained in AFR 50-2 and AFM 50-

n. Public Release: Information on this program for public release may be cleared for release only after it is reviewed for security and consistency with Air Force, Department of Defense and Government policies and programs in accordance with AFR 190-17. Contractors must submit proposed releases to the Air Force activity specified in Item 12 of the DD Form 254, "Contract Security Classification Specification", or the major command concerned.

o. Upper Stage Selection Criteria: The Inertial Upper Stage will be used to insert DoD spacecraft into high energy orbits which cannot be reached by the Space Shuttle. Integrated satellite/propulsion stages, or stages other than the standard IUS family, will be used if life cycle cost benefits can be realized for the entire DoD budget. USAF funds will not be spent to develop

propulsion stages which would be in direct competition with commercially developed spinning upper stages. Payload programs which desire to use stages other than the standard IUS family will present an alternative approach, which satisfies these criteria, to AF/RDS for evaluation and decision.

p. Schedule (For planning purposes only)

<u>UNIT</u>	<u>DELIVERY</u>
Satellite 10	Jan 81
12	Apr 81
13	Jul 81
5	Jun 82
6	Jun 82
Mobile Ground Terminals	ICC FY 84
	FOC FY 86
MPF Upgrade	FY 81
GCN Upgrade	FY 82
LPS Upgrade	FY 83
SPS IOC	FY 80
OSM	FY 81

FOR THE CHIEF OF STAFF

Ralph H. Jacobson

RALEIGH H. JACOBSON, Brigadier General, USAF
Director of Space Systems and Command,
Central Communications
DCS/Research, Development and Acquisition

1 Atch
Distribution List